

ANALISIS OF THE TENDER PROCESS FOR TRADITIONAL GENERAL CONTRACTING IN SARAWAK MALAYSIA

TSEN SOO FUI

**This research project is submitted to the Faculty of Engineering,
University Malaysia Sarawak in partial fulfillment of the requirements
for the degree of Bachelor of Engineering with Honours
(Civil Engineering)**

**Faculty OF Engineering
UNIVERSITY MALAYSIA SARAWAK
2006**

UNIVERSITI MALAYSIA SARAWAK

BORANG PENYERAHAN TESIS

Judul: Analysis of the Tender Process for Traditional General Contracting
in Sarawak, Malaysia
Sesi Pengajian: 2005-2006

Saya TSEN SOO FUI
(HURUF BESAR)

mengaku membenarkan tesis* ini disimpan di Pusat Khidmat Maklumat Akademik, Universiti Malaysia Sarawak (UNIMAS) dengan syarat-syarat kegunaan seperti berikut:

1. Hakmilik kertas projek adalah di bawah nama penulis melainkan penulisan sebagai projek bersama dan dibiayai oleh UNIMAS, hakmiliknya adalah kepunyaan UNIMAS.
2. Naskhah salinan di dalam bentuk kertas atau mikro hanya boleh dibuat dengan kebenaran bertulis daripada penulis.
3. Pusat Khidmat Maklumat Akademik, UNIMAS dibenarkan membuat salinan untuk tujuan pengajian sahaja.
4. Kertas projek hanya boleh diterbitkan dengan kebenaran penulis. Bayaran royalti adalah mengikut kadar yang dipersetujui kelak.
5. Pusat Khidmat Maklumat Akademik, UNIMAS dibenarkan membuat salinan tesis ini sebagai bahan rujukan pertukaran antara institusi pengajian tinggi.
6. ** Sila tandakan (✓) di kotak berkenaan:

- ☐ SULIT (Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972).
- ☐ TERHAD (Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/ badan di mana penyelidikan dijalankan).
- ☒ TIDAK TERHAD

Disahkan oleh

(TANDATANGAN PENULIS)

Alamat Tetap:
168, Taman Mimpi, Jalan Stapok,
93150 Kuching, Sarawak, Malaysia.

(TANDATANGAN PENYELIA)

Mdm. Ting Sim Nee
(Nama Penyelia)

Tarikh: _____

Tarikh: _____

CATATAN * Tesis dimaksudkan sebagai tesis bagi Ijazah Doktor Falsafah, Sarjana dan Sarjana Muda
** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa/ organisasi berkenaan dengan menyertakan sekali sebab dan tempoh tesis ini perlu dikelaskan sebagai SULIT atau TERHAD.

APPROVAL SHEET

This project report attached hereto, entitled “**Analysis of the Tender Process for Traditional General Contracting in Sarawak, Malaysia**” is prepared and submitted by Tsen Soo Fui in partial fulfilment of Bachelor’s Degree with Honours in Civil Engineering is hereby accepted.

(Mdm. Ting Sim Nee)
Project Supervisor

Date

Dedicated to my beloved parents, family members and friends

ACKNOWLEDGEMENT

I would like to express my gratitude and heartfelt thanks especially to my project supervisor Mdm. Ting Sim Nee for her advice, guidance, encouragement and comments over the progress of carrying out the research works and writing up this final year project.

My gratitude also goes to all the interview respondents from the construction industry for their esteem viewpoints, constructive criticisms and sound suggestions. The time they spent in the research interview is much appreciated.

Acknowledgement is not complete without thanking my fellow course mates and friends for their moral support, constructive criticisms and beneficial suggestions.

Last but not least, to my parents and sisters for their support, encouragement and understanding throughout this research, thank you very much.

ABSTRACT

Traditional General Contracting is the most common type of contracting known in the Sarawak construction industry, as it has been the main form of contract procurement for quite sometime. As our industry is growing, the tender process itself for Traditional General Contracting has not gone through much improvement since then to suit the local necessity. This thesis investigates on the problems that could occur in every stage of the tender process and to see if there are rooms for improvement. The improvement is necessary so as to optimize the tender process to meet the objective of a construction contract. Interviews were conducted to the major players in the tender process for Traditional General Contracting. The data obtained from interviews was analysed and summarized to propose a theoretical model of good practices in the tender process for Traditional General Contracting.

ABSTRAK

Kontrak Umum Tradisional atau *Traditional General Contracting* adalah sejenis perjanjian yang biasa dalam industri pembinaan Sarawak, kerana ia telah lama wujud sebagai kontrak perolehan utama. Industri pembinaan kita sedang membangun, tetapi proses tender untuk Kontrak Umum Tradisional belum mengalami kemajuan yang memberangsangkan bagi penyesuaian dengan keperluan tempatan. Tesis ini bertujuan bagi mengkaji masalah yang mungkin timbul dalam setiap peringkat proses tender dan menentukan sama ada wujudnya peluang untuk permajuan. Permajuan ini adalah mustahak untuk mengoptimumkan proses tender agar ia dapat mencapai objektif sesuatu kontrak pembinaan. Temuramah telah dijalankan dengan kakitangan utama dalam proses tender Kontrak Umum Tradisional. Data yang diperolehi dari temuramah telah dianalisis dan dirumuskan untuk mencadangkan satu model teori untuk praktis baik yang harus dijalankan dalam proses tender Kontrak Umum Tradisional.

TABLE OF CONTENTS

CONTENT	Page
TITLE	i
DEDICATION	ii
ACKNOWLEDGEMENT	iii
ABSTRACT	iv
ABSTRAK	v
TABLE OF CONTENTS	vi
LIST OF TABLES	xiii
LIST OF FIGURES	xvi
 CHAPTER 1: INTRODUCTION	
1.1 Background	1
1.2 Principal Activities in Tender Process	6
1.3 Problem Statement	9
1.4 Aim and Objectives	10
1.5 Scope of Study	11

CHAPTER 2: LITERATURE REVIEW

2.1	Tender Process for Traditional General Contracting	12
2.2	Tender Procedure	13
2.2.1	Favourable and Competitive Pricing between Main Contractors	14
2.3	Tender Documents	14
2.3.1	Disputes Due to Poor Quality of Tender Documents	15
2.4	Invitation to Tender	16
2.4.1	Site Visiting	16
2.4.2	Standard Form of Conditions	17
2.4.3	Extension of Tender Period	17
2.5	Tender Submission	17
2.5.1	Large Tender Submission in Open Tendering	19
2.5.2	Qualified Tenders and Alternative Bids	19
2.6	Evaluation/ Assessment of Tender	20
2.6.1	Assessment System	20
2.6.2	Over Reliance on Tender Price	20
2.6.3	Arithmetic Correction of the Tender	21
2.7	Acceptance of Tender	21
2.7.1	Failure to Notify Results	21
2.7.2	Penalty of Indecision	22

CHAPTER 3: METHODOLOGY

3.1	General	23
3.2	Background Studies	24
3.3	Interview Questionnaire	25
3.3.1	Organization and Project Introduction	26
3.3.2	Interview Questionnaires for Client and Consultant	27
3.3.3	Interview Questionnaires for Contractor	35
3.4	SWOT Analysis	41
3.5	Analysis of the Interview Results and Recommendations	43

CHAPTER 4: RESULTS

4.1	General	44
4.2	The Tender Process for Client	45
4.2.1	Organisation and Project Introduction	45
4.2.2	Tendering Procedures	45
4.2.3	Tender Documents	46
4.2.4	Invitation to Tender	46
4.2.5	Submission & Receipt of Tender	48
4.2.6	Evaluation/Assessment of Tender	48
4.2.7	Acceptance of Tender	50
4.2.8	Overview of the Questionnaires	51

4.3	The Tender Process for Consultant	54
4.3.1	Organisation and Project Introduction	54
4.3.2	Tendering Procedures	54
4.3.3	Tender Documents	55
4.3.4	Invitation to Tender	56
4.3.5	Submission & Receipt of Tender	56
4.3.6	Evaluation/Assessment of Tender	57
4.3.7	Acceptance of Tender	58
4.3.8	Overview of the Questionnaires	58
4.4	The Tender Process for Contractor	61
4.4.1	Organisation and Project Introduction	61
4.4.2	Tendering Documents	61
4.4.3	Invitation to Tender	63
4.4.4	Evaluation/Assessment of Tender	63
4.4.5	Acceptance of Tender	64
4.4.6	Overview of the Questionnaires	64

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

5.1	Analysis of the Interview Questionnaire	68
5.2	Tender Procedure	70
5.2.1	Favourable and Competitive Pricing between Main Contractors	70

5.2.2	Alternative Tender Procedures to	
	Shortlist Potential Tenderers	71
5.2.3	Absence of Competition in Alternative	
	Tender Procedures	72
5.3	Tender Documents	74
5.3.1	Good Quality of Tender Document to	
	Avoid Disputes	74
5.3.2	Bills of Quantities as Compulsory Document	75
5.3.3	Lack of Professionalism in Documents	
	Preparation	75
5.3.4	Checklist for Tenderer	77
5.4	Invitation to Tender	77
5.4.1	Large Tender Submission in Open Tendering	77
5.4.2	Site Visit for Clearer Scope of Work	79
5.4.3	Standard Form of Tender Conditions	79
5.4.4	Extension of Tender Period	80
5.5	Submission and Receipt of Tender	81
5.5.1	Standard Method of Measurement (SMM)	81
5.5.2	Proposal of Alternative Bid	81
5.5.3	Qualified of the Tender	82
5.6	EVALUATION/ASSESSMENT OF TENDER	82
5.6.1	Qualification-based Selection	82
5.6.2	Tender Assessment Criteria	82

5.6.3	Tender Interview	83
5.7	ACCEPTANCE OF TENDER	85
5.7.1	Tender Results Should Be Published	85
5.7.2	Penalty of Indecision	85
5.8	OVERVIEW	86
5.8.1	Clients Taking a More Active Part in Tender Process	86
5.8.2	The Procurement Trend	86
CHAPTER 6: CONCLUSION		90
REFERENCES		93
APPENDIX A Letter of Support		94
APPENDIX B Interview Questionnaires: Employer (Jabatan Kerja Raya, JKR)		96
APPENDIX C Interview Questionnaires: Employer (Jabatan Kerja Raya, JKR)		106
APPENDIX D Interview Questionnaires: Employer (Land Custody and Development Authority, LCDA)		116
APPENDIX E Interview Questionnaires: Employer (Naim Cendera Sdn. Bhd.)		126

APPENDIX F	Interview Questionnaires: Consultant	
	(Jurutera Minsar Consult Sdn. Bhd.)	136
APPENDIX G	Interview Questionnaires: Consultant	
	(PUBM Quantity Surveyors Sdn. Bhd.)	146
APPENDIX H	Interview Questionnaires: Consultant	
	(PEB Consulting QS Sdn. Bhd.)	156
APPENDIX I	Interview Questionnaires: Contractor	
	(Hock Seng Lee Berhad)	167
APPENDIX J	Interview Questionnaires: Contractor	
	(Hock Peng Furniture & General Contractor)	174
APPENDIX K	Interview Questionnaires: Contractor	
	(Sim Hung Eng Construction Sdn Bhd)	182

LIST OF TABLES

TABLES	Page
4.1a Tender Procedure	45
4.1b Tender Procedure	46
4.2 Tender Documents	46
4.3a: Invitation to Tender	46
4.3b: Invitation to Tender	47
4.4: Submission & Receipt of Tender	48
4.5a Evaluation/Assessment of Tender	48
4.5b Evaluation/Assessment of Tender	49
4.5c Evaluation/Assessment of Tender	50
4.7a Overview of the Questionnaires	51
4.7b Overview of the Questionnaires	52
4.7c Overview of the Questionnaires	53
4.8 Tender Procedure	54
4.9 Tender Documents	55
4.10 Invitation to Tender	56
4.11 Submission & Receipt of Tender	56
4.12 Evaluation/Assessment of Tender	57

4.13	Acceptance of Tender	58
4.14a	Overview of the Questionnaires	58
4.14b	Overview of the Questionnaires	59
4.14c	Overview of the Questionnaires	60
4.15a	Tender Documents	61
4.15b	Tender Documents	62
4.16a	Invitation to Tender	62
4.16b	Invitation to Tender	63
4.17	Evaluation/Assessment of Tender	63
4.18	Acceptance of Tender	64
4.19a	Overview of the Questionnaires	64
4.19b	Overview of the Questionnaires	65
4.19c	Overview of the Questionnaires	66
4.19d	Overview of the Questionnaires	67
5.1a	Issues in the Tender Process of Traditional General Contracting	69
5.1b	Issues in the Tender Process of Traditional General Contracting	70
5.2a	Summary of the Discussion- Theoretical Model of Good Practice of the Tender Process for Traditional General Contract in Sarawak	87

5.2b	Summary of the Discussion- Theoretical Model of Good Practice of the Tender Process for Traditional General Contract in Sarawak	88
5.2c	Summary of the Discussion- Theoretical Model of Good Practice of the Tender Process for Traditional General Contract in Sarawak	89

LIST OF FIGURES

FIGURES	PAGE
1.1 The Contracting Process	2
1.2 The Traditional Procurement Method	3
3.1 Overview of Interview Questionnaire	25
3.2 Interview Questionnaires for Organisation and Project Introduction	26
3.3a Interview Questionnaires for Client and Consultant	27
3.3b Interview Questionnaires for Client and Consultant	28
3.3c Interview Questionnaires for Client and Consultant	29
3.3d Interview Questionnaires for Client and Consultant	30
3.3e Interview Questionnaires for Client and Consultant	31
3.3f Interview Questionnaires for Client and Consultant	32
3.3g Interview Questionnaires for Client and Consultant	33
3.3h Interview Questionnaires for Client and Consultant	34
3.4a Interview Questionnaires for Contractor	35
3.4b Interview Questionnaires for Contractor	36
3.4c Interview Questionnaires for Contractor	37
3.4d Interview Questionnaires for Contractor	38

3.4e	Interview Questionnaires for Contractor	39
3.4f	Interview Questionnaires for Contractor	40
3.4g	Interview Questionnaires for Contractor	41
3.5	Research Methodology Overview	43

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

The construction of a civil engineering project can be divided into three significant phases namely Development Phase, Contracting Phase and Execution Phase (Ritz, 1994) as shown in figure 1.1. As part of the initial stages of contracting phase, one of the principal tasks of the project team is to develop the contract strategy to be adopted. During the development of this strategy, consideration will have to be given to the route for procuring the construction contract to realize the project objectives. Thus, an early decision on the preferred method of contract procurement is essential as it will determine the amount of pre-contract work such as design, detailing, tender documentation, and financing (Singh, 2002). The bidding, proposing, and contracting process play a key role in total construction project management. This process is the lifeblood of the engineering-construction industry. Until client and contractor have reached an agreement in contract, no steps are taken to construct the facility (Ritz, 1994).

Activities		
Development Phase	Contracting Phase	Execution Phase
Project Planning Market Development Process planning Cost estimating Basic Design	Contracting plan Contractor Screening Selection of bidders Invitation for proposals Bid Review Contract award	Detailed engineering Procurement Construction
...By owner	...By owner and contractor	... By Contractor

Figure 1.1: The Contracting Process
(Source: Ritz, 1994, Total Construction Project Management)

There are a few types of procurement method in the local construction namely:

- Traditional General Contracting (TGC);
- ‘Package Deal’ Type of Contracts;
- Management Contract (MC);
- Build, Operate and Transfer (BOT) Contracts; and
- Miscellaneous Types of Contracting.

According to Singh (2002), Traditional General Contracting is the most common type of contracting known in the engineering and construction industry in Malaysia, as it has been the main form of contract procurement for quite sometime. It is also known as General Contract or Design-Bid-Build Contract in the local industry. Obviously, it is based upon the rigid separation of design and construction.

As per Potts (1995), the stages involve in TGC are namely:

- i) Inception and Feasibility;
- ii) Design;
- iii) Tendering;
- iv) Construction;
- v) Handover and Maintenance;

Figure 1.2 shows the relationship among the major players in traditional procurement method. The employer, usually after undertaking a feasibility study, appoints a team of consultants (led by architect/ engineers) to undertake the detailed design. The design team prepares detailed drawing, specifications and often Bills of Quantities. The tender documents are prepared for invitation of tender and the contract being evaluated and awarded, usually to the contractor with the lowest bid. The contractor then manages the construction aspects, usually using sub-contractors.

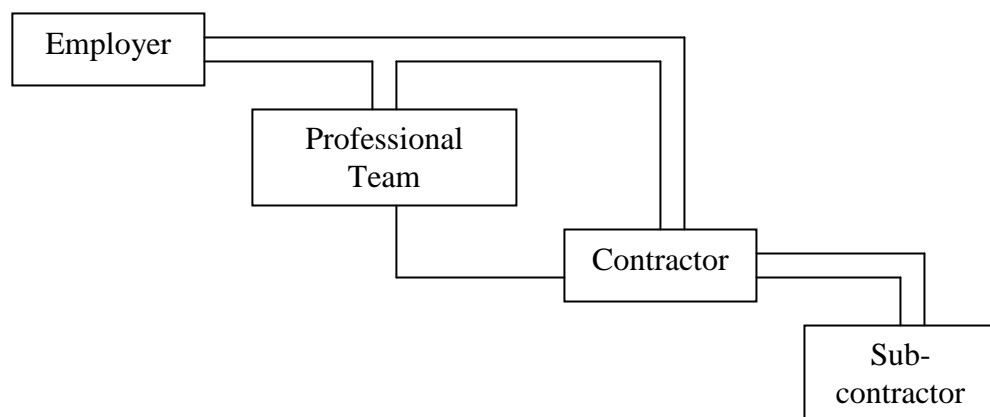


Figure 1.2: The Traditional Procurement Method

(Source: Brook, 1993, Estimating and Tendering for Construction Work)

The tendering stage of a project is one that is markedly influenced by the method of contract procurement selected by the employer, whether it is by Traditional General Contracting or any other methods. Selection of contract procurement method is very much based on the nature of various activities involve in the realization of the project. In the tendering stage, tender process must be properly and well-outlined. The tender process meanwhile is described as the process whereby a contractor is selected to carry out work and the basis of settlement of an offer on which a contract will be agreed on (Ritz, 1994).

A tender therefore is defined as an offer by contractor to employer in competition and/or negotiation to do work or supply goods at a fixed price which, if accepted by the employer, will form a binding contract between the parties (<http://www.capegateway.gov.za/eng/tenders/tenders>). Getting goods or services is also known as 'procurement'. In other words, it is an offer to carry out construction work at a price, which is a bid in accordance with the conditions set down in the tender documents.

As mentioned by Brook (1993), the purpose of client in tender stage is to select a suitable contractor who can supply a product for the lowest possible price, and can demonstrate the following:

- A reputation for good quality workmanship and efficient organization;
- The ability to complete on time;
- A strong financial standing with a good business record; and
- The expertise suited to the size and type of project.

The contractor brings together all the diverse elements and inputs of the construction process into a single, coordinated effort and assumes full, centralized responsibility for the delivery of the finishes job constructed in accordance with the contract documents. Thus, the main contractor is fully responsible to the owner for the performance of the sub-contractors and other third parties to the construction contract (Seals, 1991).

Before the more procedural aspects of tendering process are delved into, a brief assessment of each tendering procedure mode is required to be undertaken. According to Brook (1993), there are three tendering procedure modes:

- Competition Mode
- Negotiation Mode
- Hybrid Mode

Over the years, Competition mode has been the main strand running through the innumerable tender exercises undertaken especially on the local scene. As per Seals (1991), the Competitive bidding of public projects is normally required by law and is a standard procedure for public agencies. When bidding a project, the contractor estimates how much the structure will cost using the architect-engineer's drawings and specifications as the basis for the calculations. To this cost it adds what seems to be a responsible profit and guarantees to do the entire job for the stated price. Price amounts quoted by the bidding contractors most often constitute the principal basis for selection of the successful contractor, the low bidder usually receiving the contract. Therefore, Competitive bidding is the